

Instructor Manual

SURVIVAL LEVEL CLASS OVERVIEW

Module 1: Overview

Type of Diabetes (Gold)
Hypoglycemia/Hyperglycemia (Sage green)
Monitoring and record keeping (Periwinkle)

Module 2: Medications (Dark blue), Insulin (Light blue) and Exercise (Tan)

Module 3: Meal Planning (Light orange) glucose control and brief weight control

Module 4: Chronic Complications (Rust)

At the beginning of each section there will be a list of materials needed, and a pocket with a sample of each handout for the given section.

Each patient should be given a folder with pockets for the handouts and a sheet for notes of self-management actions (goals) they agree to do—i.e. take pills with breakfast and dinner; start walking 10 minutes a day; give up regular pop; eat three meal a day; cut down what they eat by 1/4, etc.

Module 1: Overview

Type of Diabetes (Gold)

OBJECTIVES: Upon completion of this module, the participant will be able to:

- Define diabetes mellitus
- State the role of diet, exercise and medication as the chief means of controlling diabetes
- Discuss the signs and symptoms of diabetes mellitus
- Discuss own type of diabetes
- Discuss the function of the pancreas, action of insulin, and effects of insulin deficiency
- State the normal range for blood sugar
- Select a personal blood sugar goal
- State the importance of blood sugar monitoring

INSTRUCTIONAL METHODS:

- Discussion
- Flip chart
- Educational materials

EVALUATION:

- Verbal discussion

Module 1: Overview

Hypoglycemia/Hyperglycemia (Sage green)

OBJECTIVES

Hypoglycemia <ul style="list-style-type: none">• Define hypoglycemia• State three causes of hypoglycemia• State three symptoms of hypoglycemia• State the blood sugar level requiring treatment• List three carbohydrate sources• State two ways to prevent hypoglycemia• Discuss use of glucagon if appropriate• State the importance of wearing medical identification	Hyperglycemia <ul style="list-style-type: none">• Define hyperglycemia• State three causes of hyperglycemia• State three symptoms of hyperglycemia• Define ketoacidosis• State two signs of ketoacidosis• Discuss when to check urine for ketones• Discuss sick day management
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INSTRUCTIONAL METHODS:

- Discussion
- Use of flip chart
- Demonstrate - box of carbohydrate sources (and glucagons kit if needed)

EDUCATIONAL MATERIALS:

Hypoglycemia: <ul style="list-style-type: none">• ADA article “Treating Hypoglycemia and How to Avoid It”• BD “Controlling Low Blood Sugar”• Glucagon handout• Novo Nordisk: Sheet of cartoons depicting “Hypoglycemia”• Life Skills “How Low Is Too Low?”• Medic Alert and other identification information	Hyperglycemia: <ul style="list-style-type: none">• List of sick day rules (copy from the flip chart)• List of sick day foods (copy from the flip chart)• ADA article “Illness”• BD “Answers to Questions About Sick Days”• Monitor, glucose test strips, monolets, Ketostix
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EVALUATION:

- Verbal discussion of self-management skills, hyperglycemia, ketoacidosis, and sick day management
- Demonstrate – urine testing for ketones

Module 1: Overview

Monitoring and record keeping (Periwinkle)

OBJECTIVES: Upon completion of this module, the participant will be able to:

- Discuss why testing blood sugar is important
- Describe two benefits of testing
- State personal testing times
- State when testing should be increased
- Discuss lancet disposal
- Demonstrate use of a blood sugar monitor
- Demonstrate how to use a log book
- Demonstrate how to test urine for ketones
- Discuss hemoglobin A1C

INSTRUCTION METHODS

- Discussion
- Flip chart
- Demonstration
 - How to obtain a blood sample
 - How to use and calibrate a blood sugar monitor
 - How to use a log book
 - How to test urine for ketones

EDUCATION MATERIALS

- ADA “Glycated Hemoglobin Is the Test That Never Forgets”
- BD: “Understanding Blood Sugar Monitoring”

EVALUATION

Return demonstration by participant

1. How to obtain blood sample
2. How to use and calibrate monitor
3. How to record blood sugars
4. How to test urine for ketones
5. Use of log book

Module 2: Medications – Oral Medications (Dark blue)

ORAL MEDICATIONS FOR DIABETES Survival Level

Notes to Instructor: For most clients it will be best to only discuss the medication(s) they are currently taking for diabetes. However, for a few in poorer control, especially those for whom additional medications are being considered, it might be helpful to briefly explain the types of medications being considered. For some this may include insulin and a brief early discussion of it might help with the patient's comfort level if initiation of insulin therapy becomes necessary.

After the first page of this presentation, use the poster/visual with samples of all the various diabetes medications. Help the person identify the specific type(s) of medication(s) he/she uses and go to a discussion of them first. If new medication(s) is/are being considered, you may want to discuss them as well. Say the name of each medication so the patient can learn its pronunciation. As appropriate, give the generic and brand name so they can recognize that it is the same medication.

Objectives:

At the end of this discussion, the person with diabetes and his/her family member(s), if appropriate, will be able to:

1. Define the purpose and action of the oral diabetes medication(s) (s)he is taking;
2. State the names of his/her oral diabetes medication, the dose to take and the time it should be taken, especially in regards to meals;
3. Plan strategies to remember to take medication(s);
4. Describe side effects of his/her diabetes medication(s) and ways to deal with them.

Materials Needed

- Poster with trade and generic names of various diabetes medications and samples of those tablets. These should be divided into 2 groups—those that make your body make more insulin and those that make your insulin work better.
- Example of compartmentalized pill container for organizing medications.
- Price information from local pharmacies and formularies for patient's insurance company.
- Handout for patient's medications

Evaluation Method:

Have patient list medications he/she is taking, the timing of those medications, and ways he/she will remember to take them. Most patients should also be able to say what the medicine does. If patient is having side effects, have him/her state ways to deal with or avoid them or discuss them with the physician.

Article(s)/References

- Instructor's Medication chart

Notes on Types of Medications:

Only the most common sulfonylureas are listed on the sulfonylurea page. Names of medicines that are included in the kind (sulfonylureas) of medicines that make your body make more insulin include: **glyburide (Micronase), glipizide (Glucotrol), Diabeta, Glynase, glimepiride (Amaryl), Orinase, tolbutamide, Diabinase, chlorpropamide, Tolinase, and Tolazamide.** The instructions for all of these are the same.

There are two kinds of medicines that make you produce more insulin. The second kind is not listed in the lesson because it is not covered on the AUCH formulary. This kind includes **Prandin and Starlix.** If the patient is taking one of these tell them: 1) Take them before EACH meal. 2) They only last for a few hours so the times of each meal can be changed from day to day. 3) If the meal is skipped or no or very little carbohydrate eaten, the pill should not be taken. For example, if a piece of meat and some vegetables or a salad is all that is eaten, the pill can be skipped.

There is another kind of medication that is not explained because AUCH does not cover it. These are “alpha-glucosidase inhibitors,” including **Precose and Glyset.** If the patient is taking them, tell them that they slow down the sugar coming from the stomach. 1) They should be taken with the first bite of each meal. 2) They can cause stomach pain and gas (so the doctor usually starts a very low dose and slowly increases it until it starts working.) 3) If this kind of medicine is taken with ones that cause low blood sugar, like insulin or sulfonylureas, only milk or glucose tablets will work on low blood sugars. (Because the Precose or Glyset slow down the sugar from all other foods getting into the blood.)

Finally, there are other kinds of pills that combine two medications not listed in the presentation because AUCH does not cover them on their formulary. The first is **Metaglip** and the second is **Avandamet.** If the patient is on the **Metaglip** tell them it is a combination of metformin and glipizide. Then go over the guidelines and give them the handouts for each of those medications, writing on each page, “Metglib has this kind of pill in it.” (And remember that low blood sugar is possible because of the glipizide.) If the patient is on **Avandamet** tell them it is a combination of Avandia and Metformin. Then go over the guidelines and give them the handouts for each of those medications, writing on each page, “Avandamet has this kind of pill in it.”

Definition of Oral Diabetes Medications

Instructor Note: Before giving this presentation, use the poster/visual with samples of all the various diabetes medications. Help the person identify the specific type(s) of medication(s) he/she uses and go to a discussion of them only. If new medication(s) is/are being considered, you may want to discuss them as well. Say the name of each medication so the patient can learn its pronunciation. As appropriate, give the generic and brand name so they can recognize that it is the same medication. After discussing the medicines the patient is taking, give the information on page. If the person does not take medicines, cover the first, second, and third patient pages.

Module 2: Medications - Insulin (Light blue)

Only the first/second/third (General Insulin Basics) and tenth (Insulin Care) pages of this section should be presented to ALL patients. Then go to the pages that cover the type(s) of insulin the patient is to take. Usually it will be best to practice the actual injection after presenting all other applicable information in this section. However, if the person is particularly fearful, doing the injection first (using the pamphlets) might allow them to then better focus on the other instructions. If you feel this is the case, start with page 11 and then go back to the first page, pages relating to the patient's insulin type(s), and end with page ten. As you teach the patient about timing food to match their insulin, take a minute to ask them the times they will be eating and plan the best time for the injection accordingly, perhaps making a note on the patient's copy of the picture page for his/her insulin.

Starting insulin is often a fearful time for a person with diabetes. It may help to tell them most people find the injections less painful than the finger poke for a blood sugar test. If the patient has been injecting insulin before, DO NOT ASSUME THEY ARE DOING IT CORRECTLY as many have had no or inappropriate instruction on injections. Use this section to review the patient's technique and understanding. You could tell them that we have new information that may not have been available when they started insulin and so you'd like to quickly review it with them.

Objectives:

At the end of this discussion, the person with diabetes and his/her family member(s), if appropriate, will be able to:

1. State the time they should take their injection(s)
2. State the timing of their meals in relation to the injection(s)
3. Perform an injection, using proper technique, on them self. (This will probably be done with sterile saline rather than the insulin.)
4. State proper care procedures for insulin and syringes.

Materials needed:

- B-D insulin starter kit – avoid short needles unless the patient is thin.
- From the kit, the B-D pamphlets as appropriate for the patient – all will need “Drawing and Injecting Insulin” and “Site Selection” and some will need “Mixing Insulin.”
- If the patient is especially fearful, an orange or other form of “fake skin” to try the injection on before the patient injects him/her self might help. However, it is usually best to do the first injection on him/her self.
- Sterile saline to use to practice an injection on them selves.
- Copies of picture – page 10 - and each page of pictures with instructions for the kind(s) of insulin the patient is taking.

Evaluation:

The patient will be able to provide the information listed in the objectives and properly draw and inject insulin for themselves. They will also express comfort about doing so on a routine basis.

B-D Materials: 1-888-367-9539 or www.bddiabetes.com

Module 2: Medications - Exercise (Tan)

Notes: If you can, ask the patient's doctor if there are any restrictions on how the person can exercise. If the person has a hard time moving, prepare to play a sample of the armchair exercise video for them.

Objectives:

At the end of this discussion, the person with diabetes and his/her family member(s), if appropriate, will be able to:

1. List benefits of exercise for them personally,
2. List three things they will do to increase their activity level (this may include a specific exercise plan such as walking 10 minutes and then slowly increasing the time or just ways to move more in everyday activities such as parking the car a block away from work, or both),
3. State what they will do to monitor and adjust for their blood sugars before they exercise or work hard if they are on insulin or sulfonylureas.

Materials Needed:

- Arm Chair sample exercise video for people who have a hard time moving
- Copy of third (Type, Intensity & Time), forth/fifth (Important Rules with Exercise) page pictures for those not on insulin or sulfonylureas
- Copy of the third, forth, fifth, seventh (Hard Exercise for More Than 10 Minutes), eighth (Light Exercise for More Than 15 Minutes), and ninth (More Exercise Tips) pages
- Diabetes identification pamphlets – including free offer (if available)

Evaluation:

The patient will be able to discuss the above objectives and write their plan for activity on the self-management plan (goal) sheet.

Module 3: Meal Planning (Light orange)

There is not time in this section to discuss all aspects of meal planning and good nutrition. Only carbohydrate (carb) counting, basic for controlling blood sugar, is discussed. This may help with weight control but alone will often not be enough to achieve significant weight loss. Further, restrictions for other health conditions or diabetes complications are not covered. Details of adjusting or matching insulin to carbohydrates are also not addressed. If the patient is adjusting insulin or needs further help for weight control or other conditions, he/she should be referred to a dietitian.

One of the most important aspects of meal planning and carb counting is estimating portion sizes or amounts of food. To facilitate this, the instructor may want to purchase a few food models. These should be appropriate for the culture and food habits of your clients. Possible useful models are listed following the evaluation section below. Another option would be to bring one or two kinds of actual food, such as a homemade tortilla, beans and rice, and discuss the amounts of carbohydrates found in these items. Either discussion should include time for the patient to become familiar with the serving sizes discussed in this discussion and relate them to items he/she can remember. Encouragement should also be given to occasionally measure or weigh food for further information. However, most clients will not even attempt portion control if they believe they have to weigh and measure all or even most foods eaten.

Objectives:

At the end of this discussion, the person with diabetes and his/her family member(s), if appropriate, will be able to:

1. List foods and food groups which contain carbohydrates
2. Read and interpret a label in terms of carbohydrate servings
3. Define one serving of carbohydrate in general terms and look up the amount of any food for one serving of carbohydrate
4. Describe and identify a cup, ½, or 1/3 cup serving size of foods he/she eats.
5. List the carbohydrate amounts he/she should try to achieve in his/her meal plan and whether this is in terms of consistent or maximum carbohydrate amounts
6. List two or three changes he/she can make in his/her typical meals to better meet these carbohydrate amounts
7. Acknowledge there are other issues in meal planning which usually need attention in order to achieve weight loss and that these may need to be addressed after carbohydrate counting is practiced and blood sugars improve
8. Acknowledge there are other issues for healthy eating and list one or two issues that they want to remember or work on in the future (perhaps after carbohydrate counting is practiced).

Materials Needed:

1. Handout available at www.dce.org entitled “Ready, Set, Start Counting – How to Use Carbohydrate Counting to Keep Your Blood Glucose Healthy”
2. Nutrition labels – a variety from foods commonly bought by patients in your community

3. Food models (see notes above for use)
4. (Optional) For more motivated patients and those who quickly pick up the concept of counting carbohydrates, “Daily Meal Planning Guide” by Lilly is a great handout. You can download reproducible copies from Lilly at www.Lilly.com
5. Some patients would benefit from copies of the pictures for this lesson. Use a copy of page 10 (Timing of Meals – Not on Insulin or Sulfonylureas) to make notes about the person’s food at the bottom of the page. Also, use the last page (Questions???) to write down possible ideas they may have about making changes to their meal plan, and then write what they decide on their self-management plan (goal) sheet.
6. Food models or real food to illustrate portion control. Suggestions below of possible food models/real food samples: (Order models from www.Nasco.com or call 1-800-558-9595)

Item/Model	Catalog Number	Cost	Comments
8 oz. glass of milk	W06354HR	\$5.40	1 cup any kind milk = 1 serving of carb
1 ½ c. dry cereal	WA19031HR	\$7.20	Equals 2 servings carb (or 3 if it is a sweetened cereal)
1/3 cup macaroni	WA23110HR	\$3.85	Equals 1 serving carb (same if it is a casserole)
1/3 cup white rice	WA09745HR	\$4.50	Equals 1 serving carb (same if it is a casserole)
1 cup white rice	WA17410HR	\$6.50	Equals 3 servings carb (take out of bowl and compare to fist for size)
1 cup spaghetti	WA18286HR	\$5.80	Equals 3 servings carb (same if it is the same amount but with a sauce)
3 oz. bagel	WA13623HR	\$6.60	Equals 3 servings carb
2 ½ inch biscuit	WO6680HR	\$4.40	1 serving carb
Slice whole wheat bread	WO6628HR	\$6.15	1 serving carb (any bread, 1 ounce = 1 serving carb)
Cornbread	WA20488HR	\$4.65	1 serving carb, same amount for 1 serving carb from unfrosted cake (frosted would be 2 servings carb)
Hard roll	W06681HR	\$4.75	Good sample of 1 ounce bread (1 serving carb)
Pancakes	WA23109HR	\$4.00	Another example of 1 serving carb from bread (compare to size of a CD to remember diameter)
Corn tortilla	WA00860HR	\$5.10	1 serving carb
Flour tortilla	WA23104HR	\$8.10	1 serving carb (compare to salad plate to remember size)
½ cup peas	W05766HR	\$4.30	1 serving carb

Item/Model	Catalog Number	Cost	Comments
Baked potato	W05766HR	\$7.05	2 servings carb (not that most think this is a small potato, but it is twice as big as the small potato that equals 1 serving carb) (some people compare potato to a computer mouse)
1 cup mashed potato	WA18285HR	\$5.75	2 servings carb (compare to fist for size)
4 ounce apple	WA20487HR	\$9.65	1 serving carb (note how small, other fruits should be similar size for 1 serving carb)
Apple	WA16084HR	\$10.35	2 servings carb (same for similar size other fruit, compare to a ball. Most would call this a small size!)
Half banana	W06712HR	\$3.60	1 serving carb
Small orange	W05829HR	\$5.00	1 serving carb(compare to a small ball)
2 Tablespoons Raisins	W06685HR	\$3.05	1 serving carb (dried fruit, use small amount)
½ cup juice	W06355HR	\$4.50	1 serving carb (same if it is regular pop or punch)
½ cup chocolate ice cream	WA13612HR	\$3.80	1 serving carb whether or not it is sugar free (lower calorie if it is fat free or even low fat frozen yogurt, but same carb)
1 cup vanilla ice cream	WA18284HR	\$6.90	2 servings carb (same comments as above)
Cookie	WA05260HR	\$2.70	2 cookies = 1 serving carb (these are small!!!) Same for most small store cookies. Higher in calories, however.)
1 cup Mac & Cheese	WA18284HR	\$6.30	3 servings carb (point out that you count casseroles as the main starch in them)
2/3 cup rice & beans	WA16864	\$10.30	2 servings carb

Note: other ethnic food models are available – check the web site or call for a catalog.

Evaluation:

1. The patient will be able to list six foods he/she commonly eats and the amount of each for one serving of carbohydrate.
2. The patient will plan at least two breakfasts and two lunches/dinners with the appropriate amounts of carbohydrate in them.
3. The patient will state how they will estimate the portions of commonly eaten carbohydrates.
4. Unless the patient eats very few commercial foods, he/she will read and interpret a label for carbohydrate information.

Module 4: Chronic Complications (Rust)

Objectives:

Upon completion of this module, the participant will be able to:

- Discuss the areas of the body that can be damaged by high blood sugar
- State that good blood sugar control can prevent or delay the onset of chronic complications
- Name two risk factors leading to heart disease
- State two ways to prevent kidney disease
- State two ways to reduce high blood pressure
- State two ways to prevent eye disease
- List guidelines for skin care, oral care and foot care

Instructional Methods:

- Discussion:
 - Methods to reduce risk factors
 - Care required to reduce onset of chronic complications
- Flip-chart

Educational Materials:

ADA

- “Cardiovascular Health”
- “Eye Care”
- “Foot Care”
- “Kidney Disease”
- “Neuropathy”
- “Skin Care”
- “Tight Diabetes Control”

Utah Diabetes Prevention and Control Program

- “Helping Patients with Diabetes Quit Using Tobacco Products”

Summary of all handouts:

ADA

- article: “Illness”
- article: “Treating Hypoglycemia and How to Avoid It”
- “Cardiovascular Health”
- “Eye Care”
- “Foot Care”
- “Glycated Hemoglobin Is The Test That Never Forgets”
- “Neuropathy”
- “Skin Care”
- “Tight Diabetes Control”
- “Kidney Disease”
- “Could You Be At Risk?”

BD

- “Answers to Questions About Sick Days”
- “Controlling Low Blood Sugar”
- “Understanding Blood Sugar Monitoring”
- Insulin Starter Kits
- Order forms

Novo Nordisk

- “Complications of Diabetes”
- “Keeping Well with Diabetes”
- Sheet of cartoons depicting “Hypoglycemia and Hyperglycemia”
- Sheet of pictures depicting “Foot Care”

Utah Diabetes Prevention and Control Program

- Helping Patients with Diabetes to Quit Using Tobacco
 - http://www.tobaccofreeutah.org/healthcare-diabetes_ed.htm

Lilly

- “Daily Meal Planning Guide”

Glucagon handout

Sick Day Foods – from flip chart

Sick Day Rules – from flip chart